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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/348,494	07/07/1999	KJELL GUSTAFSSON	040070-244	5321

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EXAMINER

LY, NGHI H

ART UNIT	PAPER NUMBER
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2686

26 + 27

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/348,494

Applicant(s)

GUSTAFSSON ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5 and 14-16 is/are allowed.
- 6) ☒ Claim(s) 6-12 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 6-12 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admitted prior art in view of Lee (US 5,818,543).

Regarding to claims 6, 9, 10, 11 and 17, the Applicant's admitted prior art disclose a mobile station comprises a first antenna (see fig.3, antenna 310), a first radio frequency circuit receiving and processing signal from first antenna

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(see fig.3, box 330), a second antenna (see fig.3, antenna 312), a second radio frequency circuit receiving and processing signal from second antenna (see fig.3, box 332), and a base band processing circuit receiving processed radio frequency signals from the first radio frequency processing circuit and from the second radio frequency processing (see fig.3, box 340) and the first radio frequency processing circuit also transmits signals from the mobile station (see fig.3, transmission from box 340 to box 330),

The Applicant's admitted prior art does not specifically disclose a base band processing circuit receiving processed radio frequency signals from the first radio frequency processing circuit and from the second radio frequency processing circuit for diversity.

Lee teaches a base band processing circuit (see fig.1, baseband demodulator 42) receiving processed radio frequency signals from the first radio frequency processing circuit and from the second radio frequency processing circuit for diversity (see fig.1, antennas 12a-12c), and providing a control signal to the second radio frequency processing circuit to selectively activate and deactivate the second radio frequency processing circuit based on determination as to whether diversity is appropriate (see fig.1, the antennas 12a-12c selection is based on the output of baseband demodulator 42), and the determination as to whether diversity is appropriate is based on a signal quality of the demodulated processed radio frequency signals (see column 2, lines 33-51).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Lee into the

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system of the Applicant's admitted prior art in order to determine which antenna is the providing the strongest antenna signal (see Lee, column 2, lines 52-55).

Regarding to claims 7, 8, 12, 18 and 19, the Applicant's admitted prior art and Lee teaches the determination as to whether diversity is appropriate is based on one type of signal quality (see Lee, column 2, lines 33-51).

The Applicant's admitted prior art and Lee does not specifically disclose the determination as to whether diversity is appropriate is based on a level comparison diversity technique *or* a likelihood comparison technique *or* a measure of the number of re-transmissions required of the demodulate processed radio frequency signals as claimed.

However, those skilled in the art thus would appreciated that the teaching of Lee could be modified such that the determination as to whether diversity is appropriate is based on other types of signal quality.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to modified the teaching of the admitted prior art and Lee as claimed, so that diversity is based on a level comparison diversity technique *or* a likelihood comparison technique *or* a measure of the number of re-transmissions required of the demodulate processed radio frequency signals.

Allowable Subject Matter

4. Claims 3-5 and 14-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 3-5 and 14-16 are allowable with the same reasons as stated in the previous Office Action dated 06/10/2003 (paper number 18).

Response to Arguments

5. Applicant's arguments with respect to claims 6-12 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

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PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

NGH
08/01/04

LESTER G. KINCAID
8/4/04
LESTER G. KINCAID
PRIMARY EXAMINER